

diacetone alcohol; a chelating agent, a reducing agent, a dye, a pigment, a water-softener, an antiseptics and a defoaming agent.

Now, the photosensitive lithographic printing plate for use in the present invention is described in detail below.

The photosensitive composition of photopolymerization type, which constitutes the photosensitive layer of photosensitive lithographic printing plate for use in the present invention, contains as the essential components, a compound having a nitrogen atom and an ethylenically unsaturated double bond, a photopolymerization initiator (also simply referred to as a photo-initiator hereinafter) and a polymer binder. If desired, various compounds, for example, a coloring agent, a plasticizer or a thermal polymerization inhibitor are used together in the photosensitive composition.

The ethylenically unsaturated compound is a compound having an ethylenically unsaturated bond capable of conducting addition-polymerization upon the function of a photopolymerization initiator when the photosensitive composition of photopolymerization type is irradiated with an active ray, thereby causing crosslinking or hardening. In the present invention, the ethylenically unsaturated

compound having a nitrogen atom in the molecule thereof is used.

The compound having an addition-polymerizable ethylenic double bond can be appropriately selected from compounds having at least one terminal ethylenically unsaturated bond, preferably compounds having two or more terminal ethylenically unsaturated bonds.

Examples of the compound include a compound having the chemical form of a monomer, a prepolymer such as a dimer, a trimer or an oligomer, a mixture thereof and a copolymer thereof.

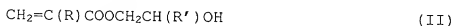
Examples of the ethylenically unsaturated compound having a nitrogen atom include an amide of an unsaturated carboxylic acid (for example, acrylic acid, methacrylic acid, itaconic acid, crotonic acid, isocrotonic acid or maleic acid) and preferably an amide of an unsaturated carboxylic acid with an aliphatic polyamine compound. Also, an unsaturated carboxylic acid ester having a hydroxy group or a nucleophilic substituent, for example, an amino group or a mercapto group and an addition reaction product of an amide with a monofunctional or polyfunctional isocyanate are preferably used. Further, an addition reaction product of an unsaturated carboxylic acid ester or amide having an isocyanato group with a monofunctional or polyfunctional alcohol, amine or thiol and a

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substitution reaction product of an unsaturated carboxylic acid ester or amide having an isocyanato group with a monofunctional or polyfunctional amine having a releasable substituent, for example, a halogen atom or a tosyloxy group are preferably used. Moreover, compounds in which the unsaturated carboxylic acid described above is substituted with an unsaturated phosphonic acid, styrene or vinyl ether may be used.

A particularly preferred addition-polymerizable compound having at least one ethylenically unsaturated double bond is a urethane series addition-polymerizable compound prepared by utilizing an addition reaction of an isocyanate with a hydroxy group.

Specific examples of such a compound include a vinyl urethane compound having at least two polymerizable vinyl groups in the molecule thereof obtained by subjecting addition of a vinyl monomer having a hydroxy group represented by formula (II) shown below to a polyisocyanate compound having at least two isocyanato groups in the molecule thereof as described in JP-B-48-41708 (the term "JP-B" as used herein means an "examined Japanese patent publication").



wherein R and R', which may be the same or different, each represents a hydrogen atom or a methyl group.